Application No.: 09/690,721   Attorney Docket No: 1999-0679
Group Art Unit: 2654

In the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the

application:

Listing of Claims:

1.   (Currently Amended) A method of task classification using morphemes which

operates on ~~the~~ a task objective of a user, the morphemes being generated by clustering

selected ones of salient sub-morphemes or salient phone phrases from training speech which

are semantically and syntactically similar, comprising:

detecting morphemes present in ~~the user's~~ an input communication from the user by

utilizing an input speech recognizer, the input communication including verbal speech from

the user; and

making task-type classification decisions based on the detected morphemes in the

user's input communication, wherein

the input speech recognizer detects the morphemes present in the verbal speech from

the user.

2.   (Currently Amended) The automated task classification method of claim 1, wherein

the morphemes include ~~at least one of verbal speech and~~ non-verbal speech.

3.   (Original) The automated task classification method of claim 2, wherein the non-

verbal speech includes the use of at least one of gestures, body movements, head movements,

non-responses, text, keyboard entries, keypad entries, mouse clicks, DTMF codes, pointers,

stylus, cable set-top box entries, graphical user interface entries and touchscreen entries.

4.   (Original) The automated task classification method of claim 1, wherein the

morphemes are expressed in multimodal form.

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5-6.   (Canceled)

7.   (Currently Amended) The automated task classification method of claim 1, further comprising entering into a dialog with the user to obtain a feedback response from the user <u>when a task-type classification decision cannot be made based on the input communication from the user</u>.

8.   (Currently Amended) The automated task classification method of claim 7, wherein <u>entering into a dialog with the user to obtain a feedback response from the user when a task-type classification decision cannot be made based on the input communication from the user further comprises prompting</u> the user ~~is prompted~~ to provide ~~a feedback response includes~~ additional information with respect to the ~~user's initial~~ input communication.

9.   (Currently Amended) The automated task classification method of claim 7, wherein <u>entering into a dialog with the user to obtain a feedback response from the user when a task-type classification decision cannot be made based on the input communication from the user further comprises prompting</u> the user ~~is prompted~~ to provide [[a]] <u>the</u> feedback response ~~that includes~~ <u>including a</u> confirmation with respect to at least one of ~~the~~ <u>a</u> set of task objectives determined in ~~the~~ <u>a task-type</u> classification decision.

10.   (Currently Amended) The automated task classification method of claim 1, wherein the input communication is routed based on ~~the~~ <u>a task-type</u> classification decision.

11.   (Original) The automated task classification method of claim 10, wherein the task objective is performed after the input communication is routed.

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12.   (Currently Amended) The automated task classification method of claim 1, wherein

the method operates in conjunction with one or more communication networks, the

~~communication networks~~ including at least one of a telephone network, the Internet, an

intranet, a Cable TV network, a local area network (LAN), ~~and~~ or a wireless communication

network.

13.   (Original) The automated task classification method of claim 1, wherein the method

is used for customer care purposes.

14.   (Original) The automated task classification method of claim 1, wherein the

classification decisions and corresponding user input communications are collected for

automated learning purposes.

15.   (Currently Amended) The automated task classification method of claim 1, wherein

~~the~~ a relationship between the generated morphemes and ~~the~~ a predetermined set of task

objectives includes a measure of usefulness of [[a]] one of the morphemes to a specified one

of the predetermined set of task objectives.

16.   (Original) The automated task classification method of claim 15, wherein the

usefulness measure is a salience measure.

17.   (Currently Amended) The automated task classification method of claim 16, wherein

the salience measure is represented as a conditional probability of [[the]] a task objective

being requested given an appearance of the ~~morpheme~~ one of the morphemes in the input

communication, the conditional probability being a highest value in a distribution of ~~the~~

conditional probabilities over the set of predetermined task objectives.

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18.   (Original) The automated task classification method of claim 16, wherein each of the

plurality of generated morphemes has a salience measure exceeding a predetermined

threshold.

19.   (Currently Amended) The automated task classification method of claim 1, wherein

the relationship between the generated morphemes and ~~the~~ a predetermined set of task

objectives includes a measure of commonality within a language of the morphemes.

20.   (Currently Amended) The automated task classification method of claim 19, wherein

the measure of commonality ~~measure~~ is a mutual information measure.

21.   (Original) The automated task classification method of claim 20, wherein each of the

plurality of generated morphemes has a mutual information measure exceeding a

predetermined threshold.

22.   (Currently Amended) The automated task classification method of claim [[11]] 1,

wherein ~~the step of~~ making [[a]] task-type classification ~~decision~~ decisions includes a

confidence function.

23.   (Currently Amended) The automated task classification method of claim [[11]] 1,

wherein the input communication from the user represents a request for at least one

predetermined task objective from a ~~of the~~ set of predetermined task objectives.

24.   (Canceled)

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25.   (Currently Amended) The automated task classification method of claim [[11]] 1,

wherein ~~each of the verbal and non-verbal speech are~~ the input communication is directed to

one of ~~the~~ a set of predetermined task objectives and ~~each of~~ the ~~verbal and non-verbal~~

~~speech~~ input communication is labeled with the one of the set of predetermined task

~~objective~~ objectives to which [[it]] the input communication is directed.

26.   (Currently Amended) [[A]] The method of ~~task classification which operates on the~~

~~task objective of a user, comprising:~~ claim 27, wherein the method comprises selecting

salient phone-phrases ~~from training speech~~ and the morphemes are acoustic morphemes~~;~~

~~generating acoustic morphemes by clustering selected ones of the salient phone-~~

~~phrases which are semantically and syntactically similar;~~

~~detecting acoustic morphemes present in the user's input communication; and~~

~~making task-type classification decisions based on the detected acoustic morphemes in the~~

~~user's input communication.~~

27.   (Currently Amended) A method of task classification which operates on [[the]] a task

objective of a user, comprising:

    selecting salient sub-morphemes or salient phone phrases from training speech

including verbal speech;

    generating morphemes by clustering selected ones of the salient sub-morphemes or

selected ones of the salient phone phrases which are semantically and syntactically similar;

    detecting morphemes present in ~~the user's~~ an input communication from the user by

utilizing an input speech recognizer to recognize the detected morphemes in the verbal

speech; and

    making task-type classification decisions based on the detected morphemes in the

~~user's~~ input communication.

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28.   (Canceled)

29.   (New) The method of claim 1, wherein the morphemes are acoustic morphemes.

30.   (New) The method of claim 27, wherein generating morphemes by clustering

selected ones of the salient sub-morphemes or selected ones of the salient phone phrases

which are semantically and syntactically similar further comprises:

        applying a ASR phone recognizer to verbal training speech to produce a plurality of

candidate phone-phrases.

31.   (New) The method of claim 30, wherein the ASR phone recognizer utilizes a

phonotactic language model.

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